



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,725	01/08/2002	Kazuhiko Yamamoto	3064 YO/50822	8970

7590 12/12/2005

Crowell & Moring, L.L.P.
P.O. Box 14300
Washington, DC 20044-4300

[REDACTED]

TRAN, TRANG U

[REDACTED]

[REDACTED]

2614

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/038,725	YAMAMOTO ET AL.	
	Examiner	Art Unit	
	Trang U. Tran	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 11 October 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10, 12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) 11 is/are withdrawn from consideration.
- 5) Claim(s) 1 and 2 is/are allowed.
- 6) Claim(s) 3-10, 12 and 13 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>01/08/02</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed October 11, 2005 have been fully considered but they are not persuasive.

In re pages 1-2, applicants argue that the species election requirement is improper because there is no relationship between the drawings and the species listed in section one of the detailed action and the species election requirement identifies 13 species, however the present application has only 8 drawings. However, in order to be responsive, applicants elect for prosecution figure 2 with claims 1-10, 12 and 13 drawn to figure 2.

In response, it is agrees that there is 8 drawings; however, the specification described thirteenth aspect of the present invention. Whether there are 13 species or 8 species, the restriction is considered to be moot because applicants elect Fig. 2 with claims 1-10, 12 and 13.

2. Claim 11 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected claim, there being no allowable generic or linking claim. Election was made in the reply filed on October 11, 2005.

Drawings

3. Figure 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 13 is rejected under 35 U.S.C. 101 because it is directed to a medium storing nonfunctional descriptive material. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in computer. See, e.g., Warmerdam, 33 F. 3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Merely claiming nonfunctional descriptive material stored in computer-readable medium does not make it statutory. See MPEP 2106, IV, 1.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 3, 7, 9-10 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipate by Sakashita et al. (US Patent No. 4,939,789).

In considering claim 3, Sakashita et al discloses all the claimed subject matter, note 1) the claimed a tuner means which receives a broadcasting radio wave corresponding to a desired frequency and which converts it into an intermediate frequency signal and outputs the intermediate frequency signal is met by the RF amplifier 3, the mixer 4 and the local oscillator 5 which convert into intermediate frequency signal (Fig. 1, col. 3, lines 20-41), 2) the claimed a variable filter means which allows the intermediate frequency signal outputted from the tuner means to pass therethrough and which can change a limitation on the frequency band of the intermediate frequency signal passing therethrough is met by the intermediate frequency filter 7 which has the pass bandwidth can be varied as desired (by the control voltage) (Figs. 1 and 7, col. 5, line 46 to col. 7, line 12), 3) the claimed a variable oscillator means which generates an oscillation signal and which can change the oscillation frequency of the oscillation signal is met by the local oscillator 5 which is a voltage-controlled variable frequency oscillator (Fig. 1, col. 3, line 49 to col. 5, line 36), 4) the claimed an amplifier/detector means which, in accordance with the oscillation frequency of the oscillation signal, subjects the intermediate frequency signal having passed through the variable filter means to intermediate frequency amplification and detection and which outputs a video signal and an audio signal is met by the signal processing circuit 13 which include the amplifier 42 (Figs. 1 and 12, col. 7, lines 46-57), and 5) the claimed a control means which, in accordance with the type of the received broadcasting radio wave, makes control to let the variable filter means limit the frequency band of the intermediate frequency signal passing therethrough and let the

variable oscillator means changes the oscillation frequency of the oscillation signal is met by the control voltage generator 11 (Figs. 1, 2 and 7, col. 4, line 53 to col. 7, line 12).

In considering claim 7, the claimed wherein: the tuner means is provided with a local oscillator a PLL circuit a local means which produces and outputs an oscillation signal of a local oscillation frequency corresponding to a desired frequency of the broadcasting radio wave and is also provided with a mixing circuit which amplifies the inputted broadcasting radio wave and which mixes the thus-amplified signal with the local oscillation signal outputted from the local oscillator means to make conversion into an intermediate frequency signal, the mixing circuit then outputting the intermediate frequency signal to the variable filter means is met by the RF amplifier 3, the mixer 4 and the local oscillator 5 which convert into intermediate frequency signal (Fig. 1, col. 3, lines 20-41).

In considering claim 9, Sakashita et al discloses all the claimed subject matter, note 1) the claimed wherein: a crystal oscillator circuit for generating a reference oscillation signal of a predetermined oscillation frequency is provided is met by the PLL 8 (Figs. 1 and 2, col. 3, line 32 to col. 5, line 36), 2) the claimed the variable oscillator means oscillation signal in accordance with the reference produces the oscillation signal provided circuit is met by the local oscillator 5 which is a voltage-controlled variable frequency oscillator (Fig. 1, col. 3, line 49 to col. 5, line 36), and 3) the claimed from the crystal oscillator the local oscillator means produces the local oscillation signal in

accordance with the reference oscillation signal is met by the control voltage generator 11 (Figs. 1, 2 and 7, col. 4, line 53 to col. 7, line 12).

In considering claim 10, Sakashita et al discloses all the claimed subject matter, note 1) the claimed wherein: a resonance circuit is provided which is connected to the crystal oscillator circuit and whose resonance frequency is almost equal to the predetermined oscillation frequency of the resonance oscillation signal is met by the resonance circuit of the filter 7 which output to the PLL 8 (Figs. 1 and 22, col. 11, line 60 to col. 12, line 10), and 2) the claimed the local oscillator means acquires the reference oscillation signal through the resonance circuit is met by the local oscillator 5 which is a voltage-controlled variable frequency oscillator (Fig. 1, col. 3, line 49 to col. 5, line 36).

Claim 12 is rejected for the same reason as discussed in claim 3.

Claim 13 is rejected for the same reason as discussed in claim 3.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakashita et al. (US Patent No. 4,939,789) in view of the admitted prior art (Fig. 8, pages 1-3 of the Specification).

In considering claim 4, Sakashita et al disclose the claimed wherein: when receiving a broadcasting radio wave, the control means makes control to let the variable

filter means limit the frequency band and let the variable oscillator means change the oscillation frequency of the oscillation signal into an oscillation frequency corresponding to the broadcasting radio wave is met by the intermediate frequency filter 7 (Figs. 1 and 7, col. 5, line 46 to col. 7, line 12) and the local oscillator 5 which is a voltage-controlled variable frequency oscillator (Fig. 1, col. 3, line 49 to col. 5, line 36). However, Sakashita et al explicitly do not disclose the claimed the broadcast radio wave in voice FM broadcast.

The admitted prior art (Fig. 8, pages 1-3 of the Specification) discloses that the broadcast receiving system with use of a broadcast receiving system in television, a broadcast radio wave in voice FM broadcast is received and is converted into an intermediate frequency signal, followed by amplification and detection to produce and output an audio signal.

Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the voice FM broadcast as taught by the admitted prior art (Fig. 8, pages 1-3 of the Specification) into Sakashita et al's system in order to receive a broadcasting radio wave and producing and outputting a video signal and an audio signal.

In considering claim 8, Sakashita et al disclose all the limitations of the instant invention as discussed in claims 3 and 7 above, except for providing the claimed wherein: the tuner means and the variable filter means are provided in a tuner IC; the amplifier/detector means and the variable oscillator means are provided in a chroma IC

which is connected to the tuner IC through an SAW filter; and the control means is provided in a microcomputer which is connected to both the tuner IC and the chroma IC.

The admitted prior art (Fig. 8, pages 1-3 of the Specification) discloses that the broadcast receiving system roughly comprises a tuner IC 1, an SAW filter 2, a video intermediate frequency amplifier (VIF) circuit 3 and a detector circuit 4 both incorporated in a chroma IC, a VCO circuit 5, an SAW filter 6, a voice intermediate frequency amplifier (QIF) circuit 7, and a microcomputer 8.

Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate chroma IC connected to the tuner IC through an SAW filter and microcomputer as taught by the admitted prior art (Fig. 8, pages 1-3 of the Specification) into Sakashita et al's system in order to receive a broadcasting radio wave and producing and outputting a video signal and an audio signal.

Allowable Subject Matter

10. Claims 1-2 are allowed.

The independent claim 1 identifies the distinct features "a variable filter circuit which allows the intermediate frequency signal to pass therethrough, the variable filter circuit having a band-pass filter circuit which limits the frequency band of the signal passing therethrough and a switching circuit capable of switching whether the intermediate frequency signal outputted from the mixing circuit is to pass through or bypass the band-pass filter; an SAW filter which allows the intermediate frequency signal having passed through the variable filter circuit to pass therethrough; and a microcomputer which, when receiving a broadcasting radio wave in voice FM broadcast,

makes control for causing the switching circuit to switch over to the side where the intermediate frequency signal is allowed to pass through the band-pass filter circuit and for causing the VCO circuit to change the oscillation frequency of the oscillation signal into an oscillation frequency corresponding to the broadcasting radio wave in the voice FM broadcast". The closes prior art, Sakashita et al. (US Patent No. 4,939,789) and the admitted prior art (Fig. 8, pages 1-3 of the Specification), either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

11. Claims 5-6 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Izuta et al. (US Patent No. 6,633,345 B2) disclose receiver selectively receiving, demodulating and outputting a TV broadcasting signal and an FM radio broadcast signal.

Brekelmans (US Patent No. 5,710,993) discloses combined TV/FM receiver. Rodeffer (US Patent No. 5,507,025) discloses method and apparatus for satellite receiver with variable predetection bandwidth.

Robbins (US Patent No. 5,293,633) discloses apparatus and method for providing digital audio in the cable television band.

Wignot et al. (US Patent No. 5,148,280) disclose stereo FM radio in a television receiver.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang U. Tran whose telephone number is (571) 272-7358. The examiner can normally be reached on 8:00 AM - 5:30 PM, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Trang U. Tran
Examiner
Art Unit 2614

TT
December 7, 2005